

NODE=B043

 $\Sigma(1385) 3/2^+$ $I(J^P) = 1(\frac{3}{2}^+)$ Status: ****

Discovered by ALSTON 60. Early measurements of the mass and width for combined charge states have been omitted. They may be found in our 1984 edition Reviews of Modern Physics **56** S1 (1984).

NODE=B043

We average only the most significant determinations. We do not average results from inclusive experiments with large backgrounds or results which are not accompanied by some discussion of experimental resolution. Nevertheless systematic differences between experiments remain. (See the ideograms in the Listings below.) These differences could arise from interference effects that change with production mechanism and/or beam momentum. They can also be accounted for in part by differences in the parametrizations employed. (See BORENSTEIN 74 for a discussion on this point.) Thus BORENSTEIN 74 uses a Breit-Wigner with energy-independent width, since a P -wave was found to give unsatisfactory fits. CAMERON 78 uses the same form. On the other hand HOLMGREN 77 obtains a good fit to their $\Lambda\pi$ spectrum with a P -wave Breit-Wigner, but includes the partial width for the $\Sigma\pi$ decay mode in the parametrization. AGUILAR-BENITEZ 81D gives masses and widths for five different Breit-Wigner shapes. The results vary considerably. Only the best-fit S -wave results are given here.

 $\Sigma(1385)$ MASSES

NODE=B043205

 $\Sigma(1385)^+$ MASSNODE=B043M+
NODE=B043M+

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
1382.80 ± 0.35 OUR AVERAGE		Error includes scale factor of 1.9. See the ideogram below.		
1383.2 ± 0.9 ^{+0.1} / _{-1.5}		AGAKISHIEV 12	SPEC	$pp \rightarrow \Sigma(1385)^+ K^+ n$, 3.5 GeV
1384.1 ± 0.7	1897	BAUBILLIER 84	HBC	$K^- p$ 8.25 GeV/c
1384.5 ± 0.5	5256	AGUILAR-... 81D	HBC	$K^- p \rightarrow \Lambda\pi\pi$ 4.2 GeV/c
1383.0 ± 0.4	9361	AGUILAR-... 81D	HBC	$K^- p \rightarrow \Lambda^3\pi$ 4.2 GeV/c
1381.9 ± 0.3	6900	CAMERON 78	HBC	$K^- p$ 0.96–1.36 GeV/c
1381 ± 1	6846	BORENSTEIN 74	HBC	$K^- p$ 2.18 GeV/c
1383.5 ± 0.85	2300	HABIBI 73	HBC	$K^- p \rightarrow \Lambda\pi\pi$
1382 ± 2	400	AGUILAR-... 72B	HBC	$K^- p \rightarrow \Lambda\pi$'s
1384.4 ± 1.0	1260	SIEGEL 67	HBC	$K^- p$ 2.1 GeV/c
1382 ± 1	750	ARMENTEROS65B	HBC	$K^- p$ 0.9–1.2 GeV/c
1381.0 ± 1.6	859	HUWE 64	HBC	$K^- p$ 1.22 GeV/c

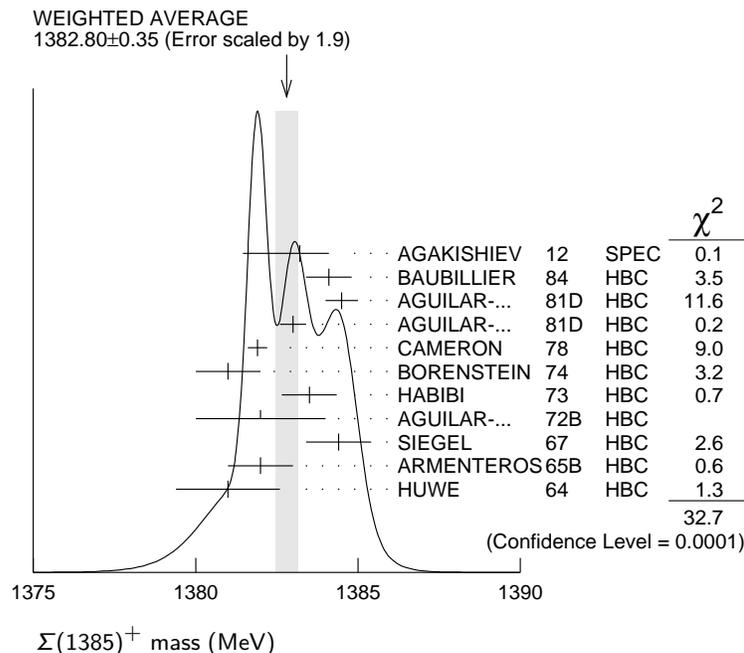
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●

1385.1 ± 1.2	600	BAKER 80	HYBR	$\pi^+ p$ 7 GeV/c
1383.2 ± 1.0	750	BAKER 80	HYBR	$K^- p$ 7 GeV/c
1381 ± 2	7k	¹ BAUBILLIER 79B	HBC	$K^- p$ 8.25 GeV/c
1391 ± 2	2k	CAUTIS 79	HYBR	$\pi^+ p/K^- p$ 11.5 GeV
1390 ± 2	100	¹ SUGAHARA 79B	HBC	$\pi^- p$ 6 GeV/c
1385 ± 3	22k	^{1,2} BARREIRO 77B	HBC	$K^- p$ 4.2 GeV/c
1385 ± 1	2594	HOLMGREN 77	HBC	See AGUILAR-BENITEZ 81D
1380 ± 2		¹ BARDADIN-... 75	HBC	$K^- p$ 14.3 GeV/c
1382 ± 1	3740	³ BERTHON 74	HBC	$K^- p$ 1263–1843 MeV/c
1390 ± 6	46	AGUILAR-... 70B	HBC	$K^- p \rightarrow \Sigma\pi$'s 4 GeV/c
1383 ± 8	62	⁴ BIRMINGHAM 66	HBC	$K^- p$ 3.5 GeV/c
1378 ± 5	135	LONDON 66	HBC	$K^- p$ 2.24 GeV/c
1384.3 ± 1.9	250	⁴ SMITH 65	HBC	$K^- p$ 1.8 GeV/c
1382.6 ± 2.1	250	⁴ SMITH 65	HBC	$K^- p$ 1.95 GeV/c
1375.0 ± 3.9	170	COOPER 64	HBC	$K^- p$ 1.45 GeV/c
1376.0 ± 3.9	154	⁴ ELY 61	HLBC	$K^- p$ 1.11 GeV/c

OCCUR=2

OCCUR=2

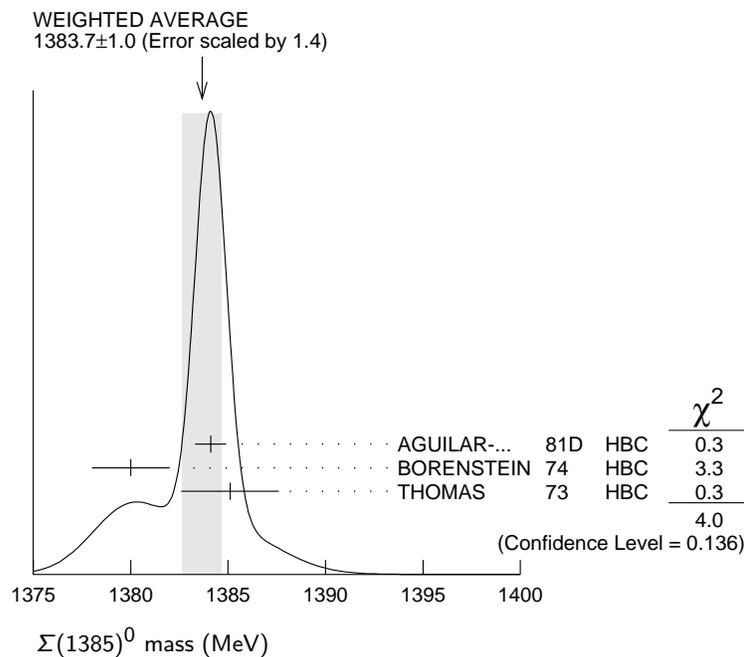
OCCUR=2

 **$\Sigma(1385)^0$ MASS**

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
1383.7±1.0 OUR AVERAGE		Error includes scale factor of 1.4. See the ideogram below.		
1384.1±0.8	5722	AGUILAR-...	81D HBC	$K^- p \rightarrow \Lambda 3\pi$ 4.2 GeV/c
1380 ±2	3100	⁵ BORENSTEIN	74 HBC	$K^- p \rightarrow \Lambda 3\pi$ 2.18 GeV/c
1385.1±2.5	240	⁴ THOMAS	73 HBC	$\pi^- p \rightarrow \Lambda \pi^0 K^0$
1389 ±3	500	⁶ BAUBILLIER	79B HBC	$K^- p$ 8.25 GeV/c

NODE=B043M0
NODE=B043M0

• • • We do not use the following data for averages, fits, limits, etc. • • •

 **$\Sigma(1385)^-$ MASS**

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
1387.2±0.5 OUR AVERAGE		Error includes scale factor of 2.2. See the ideogram below.		
1388.3±1.7	620	AGUILAR-...	81D HBC	$K^- p \rightarrow \Lambda \pi \pi$ 4.2 GeV/c
1384.9±0.8	3346	AGUILAR-...	81D HBC	$K^- p \rightarrow \Lambda 3\pi$ 4.2 GeV/c
1387.6±0.3	9720	CAMERON	78 HBC	$K^- p$ 0.96–1.36 GeV/c
1383 ±2	2303	BORENSTEIN	74 HBC	$K^- p$ 2.18 GeV/c
1390.7±1.2	1900	HABIBI	73 HBC	$K^- p \rightarrow \Lambda \pi \pi$

NODE=B043M-
NODE=B043M-

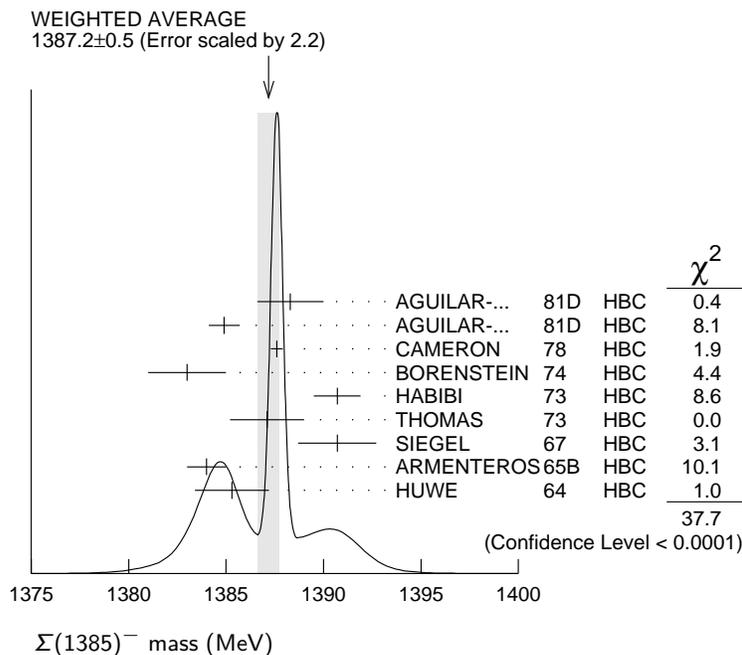
OCCUR=2

1387.1±1.9	630	4	THOMAS	73	HBC	$\pi^- p \rightarrow \Lambda \pi^- K^+$
1390.7±2.0	370		SIEGEL	67	HBC	$K^- p$ 2.1 GeV/c
1384 ±1	1380		ARMENTEROS65B	HBC	$K^- p$ 0.9–1.2 GeV/c	
1385.3±1.9	1086	4	HUWE	64	HBC	$K^- p$ 1.15–1.30 GeV/c

• • • We do not use the following data for averages, fits, limits, etc. • • •

1383 ±1	4.5k	1	BAUBILLIER	79B	HBC	$K^- p$ 8.25 GeV/c
1380 ±6	150	1	SUGAHARA	79B	HBC	$\pi^- p$ 6 GeV/c
1387 ±3	12k	1,2	BARREIRO	77B	HBC	$K^- p$ 4.2 GeV/c
1391 ±3	193		HOLMGREN	77	HBC	See AGUILAR-BENITEZ 81D
1383 ±2		1	BARDADIN...	75	HBC	$K^- p$ 14.3 GeV/c
1389 ±1	3060	3	BERTHON	74	HBC	$K^- p$ 1263–1843 MeV/c
1389 ±9	15		LONDON	66	HBC	$K^- p$ 2.24 GeV/c
1391.5±2.6	120	4	SMITH	65	HBC	$K^- p$ 1.8 GeV/c
1399.8±2.2	58	4	SMITH	65	HBC	$K^- p$ 1.95 GeV/c
1392.0±6.2	200		COOPER	64	HBC	$K^- p$ 1.45 GeV/c
1382 ±3	93		DAHL	61	DBC	$K^- d$ 0.45 GeV/c
1376.0±4.4	224	4	ELY	61	HLBC	$K^- p$ 1.11 GeV/c

OCCUR=2



$$m_{\Sigma(1385)^-} - m_{\Sigma(1385)^+}$$

NODE=B043D-+

VALUE (MeV)	CL%	DOCUMENT ID	TECN	COMMENT
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NODE=B043D-+

• • • We do not use the following data for averages, fits, limits, etc. • • •

- 2 to +6	95	7	BORENSTEIN	74	HBC	$K^- p$ 2.18 GeV/c
7.2±1.4		7	HABIBI	73	HBC	$K^- p \rightarrow \Lambda \pi \pi$
6.3±2.0		7	SIEGEL	67	HBC	$K^- p$ 2.1 GeV/c
11 ±9		7	LONDON	66	HBC	$K^- p$ 2.24 GeV/c
9 ±6			LONDON	66	HBC	$\Lambda 3\pi$ events
2.0±1.5		7	ARMENTEROS65B	HBC	$K^- p$ 0.9–1.2 GeV/c	
7.2±2.1		7	SMITH	65	HBC	$K^- p$ 1.8 GeV/c
17.2±2.0		7	SMITH	65	HBC	$K^- p$ 1.95 GeV/c
17 ±7		7	COOPER	64	HBC	$K^- p$ 1.45 GeV/c
4.3±2.2		7	HUWE	64	HBC	$K^- p$ 1.22 GeV/c
0.0±4.2		7	ELY	61	HLBC	$K^- p$ 1.11 GeV/c

OCCUR=2

OCCUR=2

$$m_{\Sigma(1385)^0} - m_{\Sigma(1385)^+}$$

NODE=B043D0+

VALUE (MeV)	CL%	DOCUMENT ID	TECN	COMMENT
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NODE=B043D0+

• • • We do not use the following data for averages, fits, limits, etc. • • •

-4 to +4	95	7	BORENSTEIN	74	HBC	$K^- p$ 2.18 GeV/c
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$m_{\Sigma(1385)^-} - m_{\Sigma(1385)^0}$

NODE=B043D-0

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
2.0±2.4	⁷ THOMAS	73	HBC $\pi^- p \rightarrow \Lambda \pi^- K^+$

NODE=B043D-0

• • • We do not use the following data for averages, fits, limits, etc. • • •

 $\Sigma(1385)$ WIDTHS

NODE=B043225

 $\Sigma(1385)^+$ WIDTHNODE=B043W+
NODE=B043W+

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
36.0± 0.7 OUR AVERAGE				
40.2± 2.1 ^{+1.2} _{-2.8}		AGAKISHIEV	12	SPEC $pp \rightarrow \Sigma(1385)^+ K^+ n$, 3.5 GeV
37.2± 2.0	1897	BAUBILLIER	84	HBC $K^- p$ 8.25 GeV/c
35.1± 1.7	5256	AGUILAR-...	81D	HBC $K^- p \rightarrow \Lambda \pi \pi$ 4.2 GeV/c
37.5± 2.0	9361	AGUILAR-...	81D	HBC $K^- p \rightarrow \Lambda 3\pi$ 4.2 GeV/c
35.5± 1.9	6900	CAMERON	78	HBC $K^- p$ 0.96–1.36 GeV/c
34.0± 1.6	6846	⁸ BORENSTEIN	74	HBC $K^- p$ 2.18 GeV/c
38.3± 3.2	2300	⁹ HABIBI	73	HBC $K^- p \rightarrow \Lambda \pi \pi$
32.5± 6.0	400	AGUILAR-...	72B	HBC $K^- p \rightarrow \Lambda \pi$'s
36 ± 4	1260	SIEGEL	67	HBC $K^- p$ 2.1 GeV/c
32.0± 4.7	750	⁹ ARMENTEROS65B	HBC	$K^- p$ 0.95–1.20 GeV/c
46.5± 6.4	859	⁹ HUWE	64	HBC $K^- p$ 1.15–1.30 GeV/c

OCCUR=2

• • • We do not use the following data for averages, fits, limits, etc. • • •

40 ± 3	600	BAKER	80	HYBR $\pi^+ p$ 7 GeV/c
37 ± 2	750	BAKER	80	HYBR $K^- p$ 7 GeV/c
37 ± 2	7k	¹ BAUBILLIER	79B	HBC $K^- p$ 8.25 GeV/c
30 ± 4	2k	CAUTIS	79	HYBR $\pi^+ p/K^- p$ 11.5 GeV
30 ± 6	100	¹ SUGAHARA	79B	HBC $\pi^- p$ 6 GeV/c
43 ± 5	22k	^{1,2} BARREIRO	77B	HBC $K^- p$ 4.2 GeV/c
34 ± 2	2594	HOLMGREN	77	HBC See AGUILAR- BENITEZ 81D
40.0± 3.2		¹ BARDADIN-...	75	HBC $K^- p$ 14.3 GeV/c
48 ± 3	3740	³ BERTHON	74	HBC $K^- p$ 1263–1843 MeV/c
33 ± 20	46	⁹ AGUILAR-...	70B	HBC $K^- p \rightarrow \Sigma \pi$'s 4 GeV/c
25 ± 32	62	⁹ BIRMINGHAM	66	HBC $K^- p$ 3.5 GeV/c
30.3± 7.5	250	⁹ SMITH	65	HBC $K^- p$ 1.8 GeV/c
33.1± 8.3	250	⁹ SMITH	65	HBC $K^- p$ 1.95 GeV/c
51 ± 16	170	⁹ COOPER	64	HBC $K^- p$ 1.45 GeV/c
48 ± 16	154	⁹ ELY	61	HLBC $K^- p$ 1.11 GeV/c

OCCUR=2

OCCUR=2

 $\Sigma(1385)^0$ WIDTHNODE=B043W0
NODE=B043W0

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
36 ± 5 OUR AVERAGE				
34.8± 5.6	5722	AGUILAR-...	81D	HBC $K^- p \rightarrow \Lambda 3\pi$ 4.2 GeV/c
39.3± 10.2	240	⁹ THOMAS	73	HBC $\pi^- p \rightarrow \Lambda \pi^0 K^0$

• • • We do not use the following data for averages, fits, limits, etc. • • •

53 ± 8	3100	¹⁰ BORENSTEIN	74	HBC $K^- p \rightarrow \Lambda 3\pi$ 2.18 GeV/c
30 ± 9	106	CURTIS	63	OSPK $\pi^- p$ 1.5 GeV/c

 $\Sigma(1385)^-$ WIDTHNODE=B043W-
NODE=B043W-

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
39.4± 2.1 OUR AVERAGE				
38.4± 10.7	620	AGUILAR-...	81D	HBC $K^- p \rightarrow \Lambda \pi \pi$ 4.2 GeV/c
34.6± 4.2	3346	AGUILAR-...	81D	HBC $K^- p \rightarrow \Lambda 3\pi$ 4.2 GeV/c
39.2± 1.7	9720	CAMERON	78	HBC $K^- p$ 0.96–1.36 GeV/c
35 ± 3	2303	⁸ BORENSTEIN	74	HBC $K^- p$ 2.18 GeV/c
51.9± 4.8	1900	⁹ HABIBI	73	HBC $K^- p \rightarrow \Lambda \pi \pi$
48.2± 7.7	630	⁹ THOMAS	73	HBC $\pi^- p \rightarrow \Lambda \pi^- K^0$
31.0± 6.5	370	⁹ SIEGEL	67	HBC $K^- p$ 2.1 GeV/c
38.0± 4.1	1382	⁹ ARMENTEROS65B	HBC	$K^- p$ 0.95–1.20 GeV/c
62 ± 7	1086	HUWE	64	HBC $K^- p$ 1.15–1.30 GeV/c

OCCUR=2

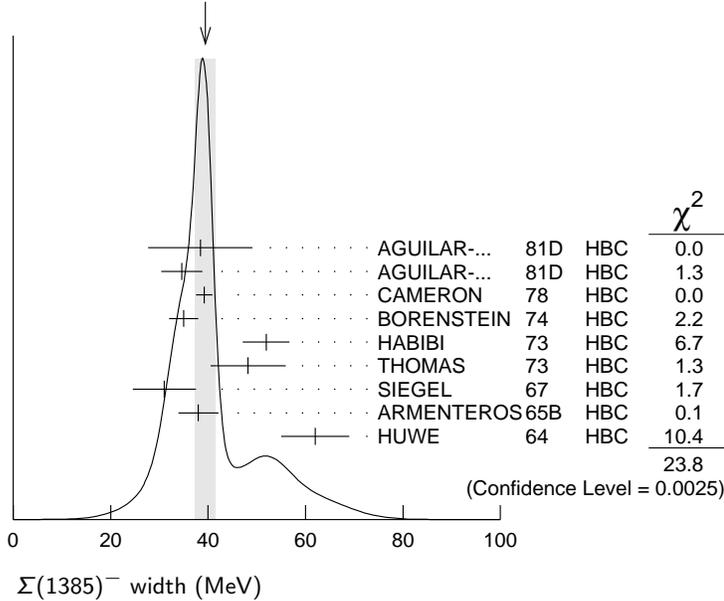
Error includes scale factor of 1.7. See the ideogram below.

• • • We do not use the following data for averages, fits, limits, etc. • • •

44 ± 4	4.5k	1	BAUBILLIER	79B	HBC	$K^- p$ 8.25 GeV/c
58 ± 4	150	1	SUGAHARA	79B	HBC	$\pi^- p$ 6 GeV/c
45 ± 5	12k	1,2	BARREIRO	77B	HBC	$K^- p$ 4.2 GeV/c
35 ± 10	193		HOLMGREN	77	HBC	See AGUILAR- BENITEZ 81D
47 ± 6		1	BARDADIN-...	75	HBC	$K^- p$ 14.3 GeV/c
40 ± 3	3060	3	BERTHON	74	HBC	$K^- p$ 1263–1843 MeV/c
29.2±10.6	120	9	SMITH	65	HBC	$K^- p$ 1.80 GeV/c
17.1± 8.9	58	9	SMITH	65	HBC	$K^- p$ 1.95 GeV/c
88 ± 24	200	9	COOPER	64	HBC	$K^- p$ 1.45 GeV/c
40			DAHL	61	DBC	$K^- d$ 0.45 GeV/c
66 ± 18	224	9	ELY	61	HLBC	$K^- p$ 1.11 GeV/c

OCCUR=2

WEIGHTED AVERAGE
39.4±2.1 (Error scaled by 1.7)



$\Sigma(1385)$ POLE POSITIONS

NODE=B043230

$\Sigma(1385)^+$ REAL PART

VALUE	DOCUMENT ID	COMMENT
1379±1	LICHTENBERG74	Extrapolates HABIBI 73

NODE=B043RE+
NODE=B043RE+

$\Sigma(1385)^+$ –IMAGINARY PART

VALUE	DOCUMENT ID	COMMENT
17.5±1.5	LICHTENBERG74	Extrapolates HABIBI 73

NODE=B043IM+
NODE=B043IM+

$\Sigma(1385)^-$ REAL PART

VALUE	DOCUMENT ID	COMMENT
1383±1	LICHTENBERG74	Extrapolates HABIBI 73

NODE=B043RE-
NODE=B043RE-

$\Sigma(1385)^-$ –IMAGINARY PART

VALUE	DOCUMENT ID	COMMENT
22.5±1.5	LICHTENBERG74	Extrapolates HABIBI 73

NODE=B043IM-
NODE=B043IM-

$\Sigma(1385)$ DECAY MODES

NODE=B043235;NODE=B043

Mode	Fraction (Γ_i/Γ)	Confidence level
Γ_1 $\Lambda\pi$	(87.0 ± 1.5) %	DESIG=1;OUR EST
Γ_2 $\Sigma\pi$	(11.7 ± 1.5) %	DESIG=2;OUR EST
Γ_3 $\Lambda\gamma$	(1.25 ^{+0.13} _{-0.12}) %	DESIG=3
Γ_4 $\Sigma^+\gamma$	(7.0 ± 1.7) × 10 ⁻³	DESIG=6
Γ_5 $\Sigma^-\gamma$	< 2.4 × 10 ⁻⁴	90% DESIG=5
Γ_6 $N\bar{K}$		DESIG=4

The above branching fractions are our estimates, not fits or averages.

$\Sigma(1385)$ BRANCHING RATIOS

NODE=B043240

 $\Gamma(\Sigma\pi)/\Gamma(\Lambda\pi)$ **Γ_2/Γ_1**

VALUE	DOCUMENT ID	TECN	CHG	COMMENT
0.135±0.011 OUR AVERAGE				
0.20 ±0.06	DIONISI	78B	HBC	± $K^- p \rightarrow \Upsilon^* K \bar{K}$
0.16 ±0.03	BERTHON	74	HBC	+ $K^- p$ 1.26–1.84 GeV/c
0.11 ±0.02	BERTHON	74	HBC	– $K^- p$ 1.26–1.84 GeV/c
0.21 ±0.05	BORENSTEIN	74	HBC	+ $K^- p \rightarrow \Lambda\pi^+\pi^-$, $\Sigma^0\pi^+\pi^-$
0.18 ±0.04	MAST	73	MPWA	± $K^- p \rightarrow \Lambda\pi^+\pi^-$, $\Sigma^0\pi^+\pi^-$
0.10 ±0.05	THOMAS	73	HBC	– $\pi^- p \rightarrow \Lambda K\pi$, $\Sigma K\pi$
0.16 ±0.07	AGUILAR-...	72B	HBC	+ $K^- p$ 3.9, 4.6 GeV/c
0.13 ±0.04	COLLEY	71B	DBC	–0 $K^- N$ 1.5 GeV/c
0.13 ±0.04	PAN	69	HBC	+ $\pi^+ p \rightarrow \Lambda K\pi$, $\Sigma K\pi$
0.08 ±0.06	LONDON	66	HBC	+ $K^- p$ 2.24 GeV/c
0.163±0.041	ARMENTEROS65B	HBC	±	$K^- p$ 0.95–1.20 GeV/c
0.09 ±0.04	HUWE	64	HBC	± $K^- p$ 1.2–1.7 GeV
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●				
<0.04	ALSTON	62	HBC	±0 $K^- p$ 1.15 GeV/c
0.04 ±0.04	BASTIEN	61	HBC	±

NODE=B043R1
NODE=B043R1

OCCUR=2

 $\Gamma(\Lambda\gamma)/\Gamma(\Lambda\pi)$ **Γ_3/Γ_1** This ratio is of course for $\Sigma(1385)^0 \rightarrow \Lambda\gamma$ and $\Lambda\pi^0$.

VALUE (units 10^{-2})	EVTS	DOCUMENT ID	TECN	COMMENT
1.43^{+0.15}_{-0.13} OUR AVERAGE				
1.42±0.12 ^{+0.11} _{-0.07}	624 ± 25	KELLER 11	CLAS	$\gamma p \rightarrow K^+ \Lambda\gamma$, E_γ 1.6–3.8 GeV
1.53±0.39 ^{+0.15} _{-0.24}	61	TAYLOR 05	CLAS	$\gamma p \rightarrow K^+ \Lambda\gamma$

NODE=B043R4
NODE=B043R4
NODE=B043R4 **$\Gamma(\Sigma^+\gamma)/\Gamma(\Sigma\pi)$** **$\Gamma_4/\Gamma_2$** This ratio is for $\Sigma(1385)^+ \rightarrow \Sigma^+\gamma$ over $\Sigma(1385)^+ \rightarrow \Sigma\pi$.

VALUE (%)	DOCUMENT ID	TECN	COMMENT
5.98±1.11^{+0.27}_{-0.61}			
	11	KELLER 12	CLAS $\gamma p \rightarrow K^0 \Sigma(1385)^+$

NODE=B043R6
NODE=B043R6
NODE=B043R6 **$\Gamma(\Sigma^-\gamma)/\Gamma_{\text{total}}$** **$\Gamma_5/\Gamma$**

VALUE	CL%	DOCUMENT ID	TECN	CHG	COMMENT
<2.4 × 10⁻⁴					
	90	12 MOLCHANOV 04	SELX	–	$\Sigma^- \text{Pb} \rightarrow \Sigma(1385)^-$ Pb, 600 GeV

NODE=B043R5
NODE=B043R5

● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●

<6.1 × 10 ⁻⁴	90	13 ARIK	77	SPEC	– $\Sigma^- \text{Pb} \rightarrow \Sigma(1385)^-$ Pb, 23 GeV
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 $(\Gamma_i/\Gamma_f)^{1/2}/\Gamma_{\text{total}}$ in $N\bar{K} \rightarrow \Sigma(1385) \rightarrow \Lambda\pi$ **$(\Gamma_6/\Gamma_1)^{1/2}/\Gamma$**

VALUE	DOCUMENT ID	CHG	COMMENT
+0.586±0.319	14 DEVENISH 74B	0	Fixed-t dispersion rel.

NODE=B043R3
NODE=B043R3 **$\Sigma(1385)$ FOOTNOTES**

NODE=B043

¹ From fit to inclusive $\Lambda\pi$ spectrum.² Includes data of HOLMGREN 77.³ The errors are statistical only. The resolution is not unfolded.⁴ The error is enlarged to Γ/\sqrt{N} . See the note on the $K^*(892)$ mass in the 1984 edition.⁵ From a fit to $\Lambda\pi^0$ with the width fixed at 34 MeV.⁶ From fit to inclusive $\Lambda\pi^0$ spectrum with the width fixed at 40 MeV.⁷ Redundant with data in the mass Listings.⁸ Results from $\Lambda\pi^+\pi^-$ and $\Lambda\pi^+\pi^-\pi^0$ combined by us.⁹ The error is enlarged to $4\Gamma/\sqrt{N}$. See the note on the $K^*(892)$ mass in the 1984 edition.¹⁰ Consistent with +, 0, and – widths equal.¹¹ KELLER 12 gives $\Gamma(\Sigma^+\gamma)/\Gamma(\Sigma^+\pi^0) = (11.95 \pm 2.21^{+0.53}_{-1.21})\%$, using 1/2 our total $\Sigma(1385) \rightarrow \Sigma\pi$ fraction for $\Sigma^+\pi^0$. We divide the KELLER 12 value by two.¹² We calculate this from the MOLCHANOV 04 upper limit of 9.5 keV on the $\Sigma^-\gamma$ width.¹³ We calculate this from the ARIK 77 upper limit of 24 keV on the $\Sigma^-\gamma$ width.¹⁴ An extrapolation of the parametrized amplitude below threshold.NODE=B043;LINKAGE=E
NODE=B043;LINKAGE=F
NODE=B043;LINKAGE=D
NODE=B043;LINKAGE=A
NODE=B043;LINKAGE=B
NODE=B043;LINKAGE=C
NODE=B043;LINKAGE=R
NODE=B043;LINKAGE=P
NODE=B043;LINKAGE=M
NODE=B043;LINKAGE=N
NODE=B043R6;LINKAGE=KENODE=B043;LINKAGE=MO
NODE=B043R5;LINKAGE=AR
NODE=B043;LINKAGE=S

$\Sigma(1385)$ REFERENCES

NODE=B043

AGAKISHIEV	12	PR C85 035203	G. Agakishiev <i>et al.</i>	(HADES Collab.)	REFID=54063
KELLER	12	PR D85 052004	D. Keller <i>et al.</i>	(JLab CLAS Collab.)	REFID=54397
KELLER	11	PR D83 072004	D. Keller <i>et al.</i>	(CLAS Collab.)	REFID=16515
TAYLOR	05	PR C71 054609	S. Taylor <i>et al.</i>	(JLab CLAS Collab.)	REFID=50670
Also		PR C72 039902 (errata.)	S. Taylor <i>et al.</i>	(JLab CLAS Collab.)	REFID=50978
MOLCHANOV	04	PL B590 161	V.V. Molchanov <i>et al.</i>	(FNAL SELEX Collab.)	REFID=49908
BAUBILLIER	84	ZPHY C23 213	M. Baubillier <i>et al.</i>	(BIRM, CERN, GLAS+)	REFID=32058
PDG	84	RMP 56 S1	C.G. Wohl <i>et al.</i>	(LBL, CIT, CERN)	REFID=41170
AGUILAR-...	81D	AFIS A77 144	M. Aguilar-Benitez, J. Salicio	(MADR)	REFID=32057
BAKER	80	NP B166 207	P.A. Baker <i>et al.</i>	(LOIC)	REFID=32056
BAUBILLIER	79B	NP B148 18	M. Baubillier <i>et al.</i>	(BIRM, CERN, GLAS+)	REFID=32053
CAUTIS	79	NP B156 507	C.V. Cautis <i>et al.</i>	(SLAC)	REFID=32054
SUGAHARA	79B	NP B156 237	R. Sugahara <i>et al.</i>	(KEK, OSKC, KINK)	REFID=32055
CAMERON	78	NP B143 189	W. Cameron <i>et al.</i>	(RHEL, LOIC)	REFID=31837
DIONISI	78B	PL 78B 154	C. Dionisi, R. Armenteros, J. Diaz	(CERN, AMST+)	REFID=32051
ARIK	77	PRL 38 1000	E. Arik <i>et al.</i>	(PITT, BNL, MASA)	REFID=50388
BARREIRO	77B	NP B126 319	F. Barreiro <i>et al.</i>	(CERN, AMST, NIJM)	REFID=32047
HOLMGREN	77	NP B119 261	S.O. Holmgren <i>et al.</i>	(CERN, AMST, NIJM)	REFID=32048
BARDADIN-...	75	NP B98 418	M. Bardadin-Otwinowska <i>et al.</i>	(SACL, EPOL+)	REFID=32045
BERTHON	74	NC 21A 146	A. Berthon <i>et al.</i>	(CDEF, RHEL, SACL+)	REFID=31745
BORENSTEIN	74	PR D9 3006	S.R. Borenstein <i>et al.</i>	(BNL, MICH)	REFID=32040
DEVENISH	74B	NP B81 330	R.C.E. Devenish, C.D. Froggatt, B.R. Martin	(DESY+)	REFID=30036
LICHTENBERG	74	PR D10 3865	D.B. Lichtenberg	(IND)	REFID=32042
Also		Private Comm.	D.B. Lichtenberg	(IND)	REFID=32043
HABIBI	73	Thesis Nevis 199	M. Habibi	(COLU)	REFID=32476
Also		Purdue Conf. 387	C. Baltay <i>et al.</i>	(COLU, BING)	REFID=32037
MAST	73	PR D7 3212	T.S. Mast <i>et al.</i>	(LBL) IJP	REFID=31744
Also		PR D7 5	T.S. Mast <i>et al.</i>	(LBL) IJP	REFID=32035
THOMAS	73	NP B56 15	D.W. Thomas <i>et al.</i>	(CMU) JP	REFID=31703
AGUILAR-...	72B	PR D6 29	M. Aguilar-Benitez <i>et al.</i>	(BNL)	REFID=20205
COLLEY	71B	NP B31 61	D.C. Colley <i>et al.</i>	(BIRM, EDIN, GLAS+)	REFID=31739
AGUILAR-...	70B	PRL 25 58	M. Aguilar-Benitez <i>et al.</i>	(BNL, SYRA)	REFID=20692
PAN	69	PRL 23 808	Y.L. Pan, F.L. Forman	(PENN) I	REFID=32027
SIEGEL	67	Thesis UCRL 18041	D.M. Siegel	(LRL)	REFID=32026
BIRMINGHAM	66	PR 152 1148	M. Haque <i>et al.</i>	(BIRM, GLAS, LOIC, OXF+)	REFID=31692
LONDON	66	PR 143 1034	G.W. London <i>et al.</i>	(BNL, SYRA) J	REFID=11774
ARMENTEROS	65B	PL 19 75	R. Armenteros <i>et al.</i>	(CERN, HEID, SACL)	REFID=32020
SMITH	65	Thesis UCLA	L.T. Smith	(UCLA)	REFID=32023
COOPER	64	PL 8 365	W.A. Cooper <i>et al.</i>	(CERN, AMST)	REFID=32017
HUWE	64	Thesis UCRL 11291	D.O. Huwe	(LRL) JP	REFID=32018
Also		PR 181 1824	D.O. Huwe	(LRL)	REFID=32019
CURTIS	63	PR 132 1771	L.J. Curtis <i>et al.</i>	(MICH) J	REFID=32016
ALSTON	62	CERN Conf. 311	M.H. Alston <i>et al.</i>	(LRL)	REFID=31689
BASTIEN	61	PRL 6 702	P.L. Bastien, M. Ferro-Luzzi, A.H. Rosenfeld	(LRL)	REFID=32009
DAHL	61	PRL 6 142	O.I. Dahl <i>et al.</i>	(LRL)	REFID=32011
ELY	61	PRL 7 461	R.P. Ely <i>et al.</i>	(LRL) J	REFID=32012
ALSTON	60	PRL 5 520	M.H. Alston <i>et al.</i>	(LRL) I	REFID=32008